

Advanced Algebra -Assignment #
Linear Models & Absolute Value

Name _____

Solve.

1. Write an equation of a line in slope-intercept form that has an x-intercept of 5 and a y-intercept of 3.
2. Write an equation of a line in slope-intercept form that has a slope of $-\frac{3}{4}$ and contains $(-8, 5)$.
3. Chantel can type 174 words in 3 minutes. In 6 minutes she can type 348 words. How many words will be typed in 8 minutes?
 - a. Write the ordered pairs.
 - b. Find the slope
 - c. Find the y-intercept.
 - d. Write the linear model that represents the situation.
 - e. Answer the question to the problem.

4. a. Use the data from problem 20 on page 82 to develop a scatter plot on your calculator. Show the graph to me.
- b. Find the equation for the line of best-fit. _____

Describe how the values of a , b and c in " $y = a|x - b| + c$ " affect each of the absolute value functions in relationship to the parent graph of $y = |x|$.

5. $y = 4|x|$

6. $y = |x + 3|$

7. $y = |x| - 4$

8. $y = |x - 5| + 1$

Write an absolute value function whose graph represents the following.

9. a translation of 3 units down
from the parent graph of $y = |x|$

10. a translation of 4 units to the
right of the parent graph of $y = |x|$

11. a translation of 2 units up and 1
to the left from the parent graph
of $y = |x|$

12. a translation of 6 units down and 2
units to the right from the parent
graph of $y = |x|$